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AUTHORITY

AGO ltr 29 Apr 1980

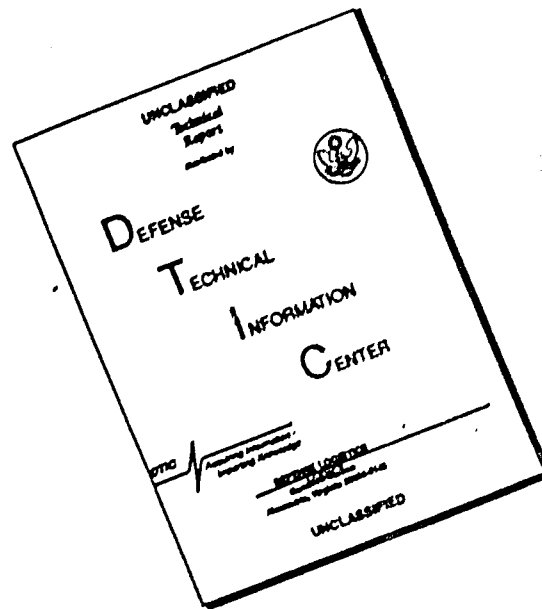
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**DEPARTMENT OF THE ARMY**  
**OFFICE OF THE ADJUTANT GENERAL**  
**WASHINGTON, D.C. 20310**

IN REPLY REFER TO

AGAM-P (M) (3 Jul 69) FOR OT UT 692113

8 July 1969

SUBJECT: Operational Report - Lessons Learned, Headquarters, 93d Engineer Bn, Period Ending 30 April 1969

SEE DISTRIBUTION

1. Subject report is forwarded for review and evaluation in accordance with paragraph 5b, AR 525-15. Evaluations and corrective actions should be reported to ACSFOR OT UT, Operational Reports Branch, within 90 days of receipt of covering letter.
2. Information contained in this report is provided to insure appropriate benefits in the future from lessons learned during current operations and may be adapted for use in developing training material.

BY ORDER OF THE SECRETARY OF THE ARMY:

*Kenneth G. Wickham*

KENNETH G. WICKHAM  
Major General, USA  
The Adjutant General

1 Incl  
as

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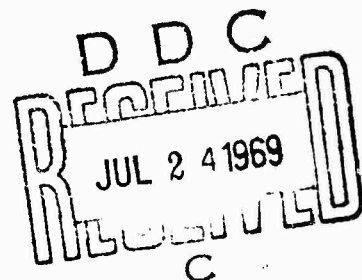
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**(ARMY) ATTN FOR OT UT. WASHINGTON, D.C. 20310**

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EGFB-OF

15 May 1969

SUBJECT: Operational Report of 93d Engineer Battalion (Const) for  
Period Ending 30 April 1969, RCS CS FOR - 65 (RI)

The Battalion continued to be responsible for one of the six sectors of the Dong Tam Base perimeter and manned the eight bunkers comprising that sector. The Battalion was subordinate in this role to the 9th Division Support Command Commander who had the tactical responsibility for defense of Dong Tam and operations in the immediate vicinity of the base. At Moc Hoa area defense was under the control of the Commander of B/41st Special Forces Detachment. B Company's compound was within the Moc Hoa perimeter, which was manned by regional and popular forces and "M" Force Special Forces. B Company was responsible for the security of its own compound, and for coordination with the Commander of B/41st. Regional forces provided job site security at night for B Company's two shift operation. Other security requirements were recognized in arming and convoying all vehicles going off Dong Tam.

The Battalion Headquarters remained at Dong Tam, with several major personnel changes during the period. LTC John J. Plunkett, CE, 070017 to Bn CO, vice LTC Ralph H. Sievers, CE, 069337; MAJ William L. McGovern, CE, 095360 to Bn XO, vice MAJ Robert C. Trippel, CE, 05700118; 1LT Russell P. Bone, CE, 05251922, to Bn S-4, vice 1LT Paul D. Gordon, CE, 05243892; CPT Cardell F. Banks, CE, 05258353 to CO, A Co, vice CPT Francis M. Morasco, CE, OF 100965; 1LT Roger F. Rodgers, CE, 05253326 to CO, B Co, vice CPT Lyle L. Merritt, CE, OF 104198; 1LT Lawrence J. Fress, CE, 05258173 to CO, D Co vice 1LT Robert L. Seelcy, CE, 05243984; 1LT Darrell J. Dwyer, SigC, 0534984 to CO, HHC, vice 1LT Roger P. Rodgers; 1LT Gordon A. Adler, CE, 05252522, to Bn S-1, vice 1LT, Joseph M. Nyikos, CE, 05253692. Basic personnel and administrative statistics are given in Inclosure 4.

Medical facilities were upgraded with the completion of a new Battalion Aid Station. Medical support for B Company was provided by two resident aid men of the Battalion Medical Section, and weekly visits by the Battalion Surgeon, and by US Military and civilian doctors at the Vietnamese Kien Tuong Provincial Hospital adjacent to the B Company compound at Moc Hoa.

On 10-14 February 1969 the Battalion stood an Annual IG. The Battalion was given an over all rating of satisfactory. The Battalion also had a CMMI by the 20th Engineer Brigade. Two of the three Companies inspected passed the inspection.

### 2. Section 2. Lessons Learned: Commander's Observations, Evaluations, and Recommendations

a. Personnel: None

b. Operations:

#### (1) Expedient Pouring Chute

(a) OBSERVATION. In using the 5-ton dump truck to transport concrete a large amount of spillage has occurred when attempting to dump the load into a restricted area.

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SUBJECT: Operational Report of 93d Engineer Battalion (Const) for  
Period Ending 30 April 1969, RCS CS FOR - 65 (RI)

15 May 1969

(b) EVALUATION. A simple, but efficient way of pouring concrete into a restricted area was required. A pouring chute was found easy to construct using available materials, and removable when the 5 ton dump truck is required to operate under designed conditions. This chute could also be used to pour other materials (i.e. sand, gravel, bulk lime, etc) into constricted areas.

(c) RECOMMENDATION. Taking into consideration all requirements, a pouring chute can be constructed with a minimum effort using angle iron and M8A1 matting. The chute should be placed and secured in the opening of the existing tail gate. This will enable the concrete to be directed into small areas. (See Inclosure 5)

### (2) Hydro Seeder Used in FOL Fires

(a) OBSERVATION. The concentrated foam provided for controlling FOL fires must be thoroughly mixed with water to be fully effective.

(b) EVALUATION. An agitation mechanism is required to mix the concentrated foam with water. For best results the agitation mechanism should be incorporated into the dispensing unit.

(c) RECOMMENDATION. It was found that the hydro seeder meets the requirements of providing an agitation mechanism for mixing concentrated foam and water, as well as providing a very efficient method of producing an effective high pressure spray for FOL Fires.

### (3) Repair of M8A1 Matting

(a) OBSERVATION. Due to excessive use and poor soil bearing it has been found that the moment transferring ends of M8A1 matting will break the welds and fall out. This breaking is more prevalent where C-130s are being used. This loose metal and unsecure matting is a safety hazard to the aircraft using the runway.

(b) EVALUATION. It was deemed necessary to provide an acceptable repair for the breaks without discontinuing air traffic on the runway.

(c) RECOMMENDATION. It was found that welding a  $\frac{1}{4}$ " thick steel plate over the break would sufficiently repair the broken matting ends. This plate will cover the sharp edges and give added strength to the matting.

### (4) Self Closing Valve

(a) OBSERVATION. In flooding a helicopter hover lane, it was observed that the water would back out of the canal during low tide.

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EGFR-OF

15 May 1969

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Period Ending 30 April 1969, RCS CS FOR - 65 (RI)

(b) EVALUATION. A means of letting water flood into the hover lane during high tide via canal, but remain in the hover lane during low tide.

(c) RECOMMENDATION. Construct a four foot wide ditch between the canal and the hover lane. This will provide the flooding of the hover lane at high tide. Cut a 3'x2' opening in a piece of 3/4" plywood which is placed in the ditch. Then construct a plywood door approximately two inches longer and wider than the opening. Secure door with a hinge constructed from T-17 membrane. This membrane was bellowed on the side so that the door could open parallel to the water surface. The door is forced open during high tide, and will close during low tide due to the reverse pressure of water from the hover lane.

### (5) Expedient Method of Dedrumming Peneprime

(a) OBSERVATION. Pumps on asphalt distributor trucks were inoperable.

(b) EVALUATION. A fast efficient means of dedrumming peneprime into the asphalt distributor is required.

(c) RECOMMENDATION. Construct a tower 10' high. Leave an opening in the bottom of the tower platform. Then construct a smaller platform directly below the 10' tower, leaving enough space to place a salvaged 1,500 gallon collapsible water tank on the lower platform. Dedrum peneprime on upper platform and pour liquid into collapsible tank. Trucks can load by driving under spout leading from tank. By placing a gate valve on the spout, dedrumming can continue without waiting for distributor trucks to return.

### (6) Expedient Peneprime Distributor

(a) OBSERVATION. The immediate need to peneprime a large area for dust control. Since a manufacture distributor was not available, an expedient means was devised.

(b) EVALUATION. A fast, efficient, and expedient means of distributing peneprime is required using material immediately available.

(c) RECOMMENDATION. A suitable distributor can be built using a 25 ton lowbed trailer and two unservicable conex containers. The conexs should be centrally mounted, side by side, on their backs with open sides facing upwards and the doors removed. A six inch diameter hole is to be cut through each conex approximately two inches from the bottom. This will later accept a 6" pipe which would permit joining the containers forming one large tank. Then cut a four inch hole in the rear of the tank, again centered and approximately two inches from the floor. This will later accept a pipe leading to the valve and spray bar. The next step is to line the inside of the containers with T-17

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15 May 1969

SUBJECT: Operational Report of 93d Engineer Battalion (Const) for  
Period Ending 30 April 1969, RGS CSFOR-65 (R1)

membrane to make the containers water tight. This is accomplished by cutting two large continuous squares of membrane and stuffing them into each box. The bags, thus formed, are without seams. The membrane is then attached around the upper opening using 2"x4" lumber bolted to the side of the containers. A 6-inch hole is then cut into each bag to coincide with the hole previously cut through the containers. A 6-inch pipe, 12-inches in length and threaded at both ends is placed between the containers. Care must be taken in sealing between the membrane and the pipe to prevent leakage. This can be done by making 1x1-inch gaskets from  $\frac{1}{4}$ -inch plywood and mounting them around each end of the pipe. Then screw a 6-inch nut up tight on to each end making a seal.

While construction of the tanks is in process, a team of welders can construct the spray bar assembly. Run a 4-inch pipe from the rear of the conex tank to the rear of the lowboy. Then install a 4-inch gate at the end of the pipe to control the flow. The spraybar itself is made of two 4-inch pipes, 6-feet in length. One-eighth-inch slits are placed on 2-inch centers along the length. A "T" connector and 90-degree elbow joins these to the valve, so the bar assembly will hang from the rear of the lowboy, approximately two feet from the ground. All that remains is to install a grating over the top of the containers and the distributor is complete. The distributor is relatively easy to load and has enough capacity to cover a large area. (see inclosure 6)

### (7) Expedient Concrete Restroom Fixtures

(a) OBSERVATION. Because of cost limitations in the upgrading of MACV facilities, the necessity for inexpensive restroom fixtures becomes apparent.

(b) EVALUATION. Since sinks and urinals have a rather simple configuration, it was concluded that these items could be constructed from formed concrete.

(c) RECOMMENDATION. In construction of the sinks and urinals use reinforcing bar which is welded to the drain and to the wall mounts on the back to provide strength. A 2-1 mix using a small slump is placed in the forms. As soon as possible after pouring concrete remove inside forms and finish the concrete by smoothing the rough edges and corners. The walls and bottom of the fixtures are two inches thick and wire mesh is to be used for reinforcing. When local sand is used, erosion is a problem so the inside of the fixtures should be painted with an epoxy coating. The epoxy is available in fiberglass repair kits. (see inclosure 7)

### (8) Effectiveness of K-Wall Revetment

(a) OBSERVATION. That K-Wall revetment can be placed very easily and is very effective against direct fire.



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SUBJECT: Operational Report of 93d Engineer Battalion (Const) for  
Period Ending 30 April 1969, RCS CSFOR-65 (R1)

(b) EVALUATION. K-Wall can be erected very easily with a six man crew if a few basic techniques are observed.

(c) RECOMMENDATION: One of the major considerations in erecting the K-Wall, especially when going over one tier high, is the requirement for a stable and level base to prevent differential settlement and resultant leaning of the vertical wall. The method found most successful is placing a 4 inch concrete slab approximately 5 feet wide for a base. Although the steel panels are only four feet wide, they take on a bulge under the earth fill load which can extend their width to 55-58 inches. Another aid to construction is the use of a block scab nailed to the concrete pad form and set against the base of the joint in the K-Wall to prevent the K-Wall being displaced out of alignment while being filled. Filling either the 1 or 2 tier high revetment can be accomplished with a front loader. If a third tier is used it will normally require the use of a clam. This 4 ft thick revetment is very effective against direct fire as well as indirect fire. (See Inclosure 8)

8 Incl  
as  
Incl 1-4, wd Hq, DA

*J. J. Plunkett*  
JOHN J. PLUNKETT  
LTC, CE  
Commanding

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EGF-OP (15 May 69) 1st Ind

SUBJECT: Operational Report of 93d Engineer Battalion for Period  
Ending 30 April 1969, RCS CSFOR-65(R1)

DA, HEADQUARTERS 34TH ENGINEER GROUP (CONST), APO 96320

TO: Assistant Chief of Staff for Force Development, Department  
of the Army, Washington, D.C., 20310  
Commanding Officer, 20th Engineer Brigade, ATTN: AVBI-OS  
APO 96491

The subject report submitted by the 93d Engineer Battalion has  
been reviewed by this headquarters and is considered comprehensive  
and of value for documentation and review of the reporting unit's  
activities and experiences.

FOR THE COMMANDER:

*CK*  
DONALD L. WHITLER  
Major, AGC  
Adjutant *LTC*

Copy Furnished:  
CO, 93d Engr Bn

AVBI-OS (15 May 69) 2nd Ind

SUBJECT: Operational Report of 93rd Engineer Battalion (Const) for  
Period Ending 30 April 1969, RCS CSFOR-65 (R1)

DA, HEADQUARTERS, 20TH ENGINEER BRIGADE, APO 96491


TO: Commanding General, United States Army Vietnam, ATTN: AVHGC-DST,  
APO 96375

1. Submitted in accordance with USARV Regulation 525-15, dated 13  
April 1968.

2. Subject report for the 93rd Engineer Battalion (Const) has been  
reviewed and is considered adequate with the following comment:

Reference Section I, page 2, Logistics: Cement was available  
for issue in February however valid issue requests were not received.

FOR THE COMMANDER:



J. J. MONTGOMERY  
Major, AGC  
Adjutant

Copies Furnished:

CO, 34th Engr Gp

CO, 93rd Engr Bn

AVHGC-DST (15 May 69) 3d Ind  
SUBJECT: Operational Report of 93d Engineer Battalion (Const) for Period  
Ending 30 April 1969, RCS CSFOR-65 (R1)

HEADQUARTERS, UNITED STATES ARMY, VIETNAM, APO San Francisco 96375 **14 JUN 1969**

TO: Commander in Chief, United States Army, Pacific, ATTN: GPOP-DT,  
APO 96558

This headquarters has reviewed the Operational Report-Lessons Learned for  
the quarterly period ending 30 April 1969 from Headquarters, 93d Engineer  
Battalion (Construction) and concurs with the report as indorsed.

FOR THE COMMANDER:

*for W. C. Arntz, Cpt*  
W. C. ARNTZ  
CPT, AGC  
Assistant Adjutant General

Cy furn:  
93d Engr Bn  
20th Engr Bde

GROP-DT (15 May 69) 4th Ind

SUBJECT: Operational Report of HQ, 93d Engr Bn (Const) for Period  
Ending 30 April 1969, RCS CSFOR-65 (R1)

HQ, US Army, Pacific, APO San Francisco 96558 26 JUN 69

TO: Assistant Chief of Staff for Force Development, Department of the  
Army, Washington, D. C. 20310

This headquarters has evaluated subject report and forwarding indorse-  
ments and concurs in the report as indorsed.

FOR THE COMMANDER IN CHIEF:



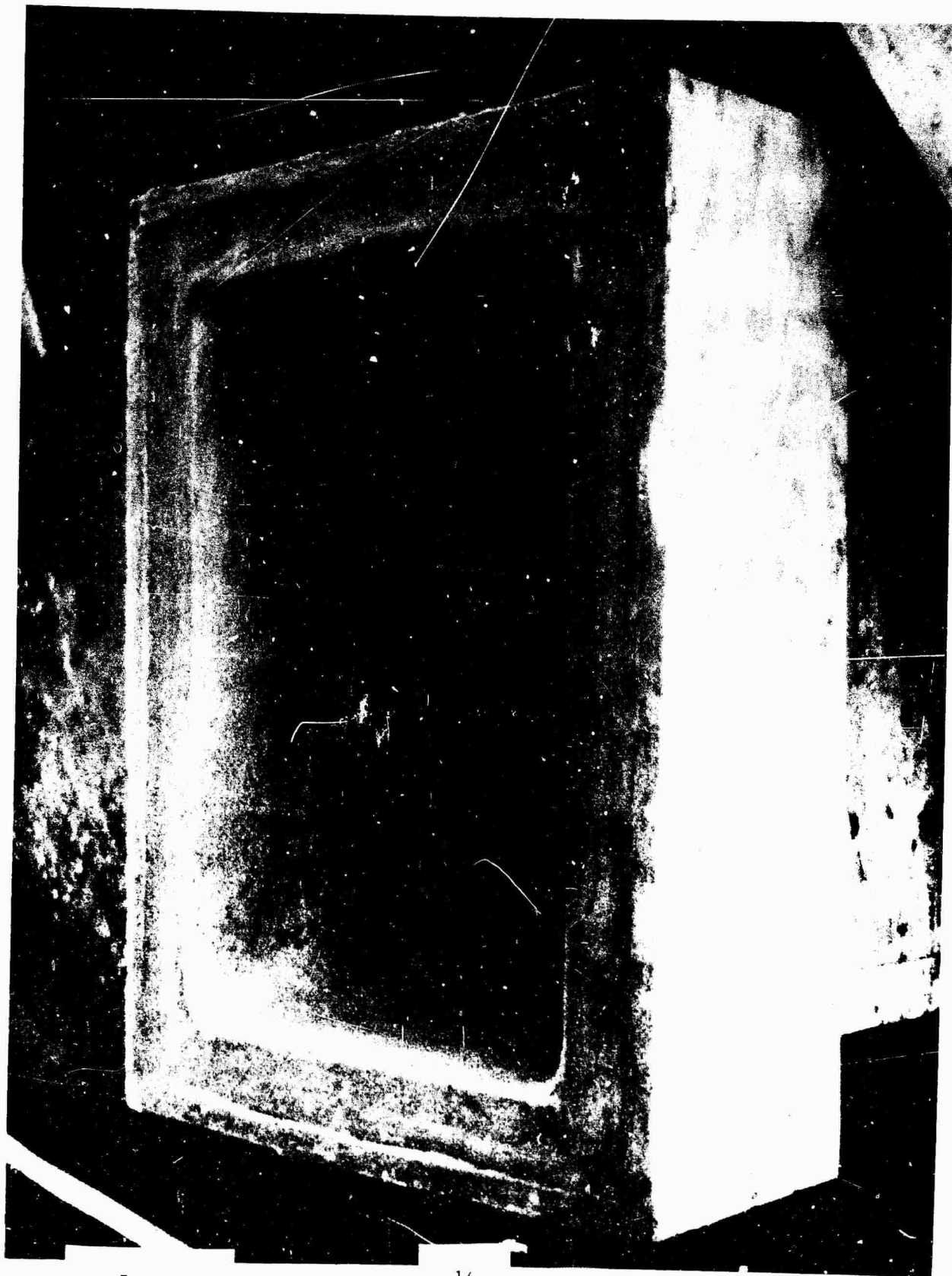
C. L. SHORTT  
CPT, AGC  
Asst AG



Incl 5



Incl 6



Incl 7

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Incl 8

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